UNITED STATES PATENT AND TRADEMARK OFFICE

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/023,808	12/21/2001	Pere Obrador	10019005	4035

7590	10/07/2004	

HEWLETT-PACKARD COMPANY
Intellectual Property Administration
P.O. Box 272400
Fort Collins, CO 80527-2400

EXAMINER
GENCO, BRIAN C

ART UNIT	PAPER NUMBER
2615	

DATE MAILED: 10/07/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

	Application No.	Applicant(s)
Office Action Summary	10/023,808	OBRADOR ET AL.
	Examiner	Art Unit
	Brian C Genco	2615

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE _3_ MONTH(S) FROM
THE MAILING DATE OF THIS COMMUNICATION.
- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
  Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☐ Responsive to communication(s) filed on _____.

2a)☒ This action is **FINAL.**   2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) _1-24_ is/are pending in the application.

    4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) _1-24_ is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

    Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

    Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

    a)☐ All   b)☐ Some * c)☐ None of:

      1.☐ Certified copies of the priority documents have been received.

      2.☐ Certified copies of the priority documents have been received in Application No. _____.

      3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

    * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1)☐ Notice of References Cited (PTO-892)

2)☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)

3)☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
    Paper No(s)/Mail Date _____.

4)☐ Interview Summary (PTO-413)
    Paper No(s)/Mail Date. _____.

5)☐ Notice of Informal Patent Application (PTO-152)

6)☐ Other: _____.

Applicant argues that there is no motivation to combine Juen and Suh since Juen already

teaches the provision of a buffer 5 for operating in conjunction with encoding processes.

In response, Examiner notes that buffer 5 in Juen is used to buffer still image data while

the moving image data is being recorded. Juen does not disclose providing a buffer to buffer the

moving image during the compressing and recording operations performed by the image

compression means 7 and moving image recording means 3. As such, Suh was utilized to teach

that it is obvious to utilize a buffer to buffer the moving image data so as to enable performing

the compression since it only operates on 8x8 block of pixels at a time. As such, even though

Juen discloses a buffer 5 for the still image data there is no disclosure of a buffer for the moving

image data. If Applicant is to continue this line of arguments then the Examiner will modify the

current rejection to be a 35 U.S.C. 102 rejection under Juen since Applicant seems to be arguing

that Juen teaches to utilize buffer 5 to buffer moving image data for compression processing.

Applicant argues that Juen in view of Suh would not have suggested temporarily storing

video frames when one or more still images are acquired.

In response, Examiner notes that Juen teaches the concurrent acquisition of still and

moving images. The still images are buffered in buffer 5 until moving image recording is

completed and the moving images are processed for recording. Since the combination of Juen

and Suh teaches to always temporarily buffer the moving image data so as to enable compression

processing the moving image frames are temporarily buffered when one or more still images are

acquired during moving image capturing.

Applicant's arguments with regards to the Niikura reference are deemed persuasive.

Claim Rejections - 35 USC § 103

The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

Claims 1, 4-14, 17, 19-21, and 24 are rejected under 35 U.S.C. 103(a) as being unpatentable over (USPN 2002/0024602 to Juen) in view of (USPN 5,712,681 to Suh).

In regards to claim 1 Juen discloses a method for concurrently acquiring, processing, and transmitting digital video and still images, comprising:

acquiring video frames from one or more image sensors (e.g., element 1);

processing the video frames using a video pipeline, wherein the video pipeline includes one or more processors (e.g., video pipeline includes elements 7, 3, and R of Fig. 5, wherein elements 4 and 7 are inherently processors for performing the labeled process, e.g., compressing);

processing the high resolution still images using a still image pipeline wherein the still image pipeline runs concurrently with the video pipeline (e.g., still video pipeline includes elements 5, 7, 4, and R, wherein the two pipelines operate concurrently, e.g., while one pipeline is recording the other pipeline is buffering).

Juen does not explicitly disclose nor preclude temporarily storing the video frames in a frame buffer when one or more high resolution still images are acquired during the video frame acquisition. Examiner notes that Juen does disclose the ability to take still images during moving image recording (paragraphs 0044, 0119; Figs. 2 and 5), wherein Juen also discloses performing

encoding processing, shown in Fig. 3. This process of encoding is described wherein a DCT is

preformed (paragraph 0047) wherein it is described in paragraphs 0086 and 0101 that in this

processing the image is divided into 8x8 pixel blocks wherein each block is operated on

individually as is known in the art. Examiner notes that it is known in the art to buffer the image

data while performing compression in this manner as taught by Suh. Suh discloses to perform

various operations on image data while it is buffered, such as color correction and compression

(column 4, lines 8-58). Therefore it would have been obvious to one of ordinary skill in the art

to have added a buffer to Juen's invention in order to enable processing of image data such as a

DCT. As such, there would be a buffer for temporarily storing video frames when one or more

still image is acquired during video frame acquisition.

In regards to claim and 4 Juen discloses downsampling the video frames as disclosed by

element 8 of Fig. 5 and paragraphs 47 and 49. Note further element 7 of Fig. 5.

In regards to claim 5 Examiner notes that it is extremely well known in the art to provide

communications channels in a digital camera in order to provide data transportability. Official

notice is taken. Therefore it would have been obvious to one skilled in the art at the time of the

invention to have added communication channels in order to provide data transportability.

In regards to claim 6 see element R.

In regards to claim 7 see Examiners notes on the rejection of claim 1. Note that since the

buffer is storing the video images it would need to be emptied so that if a subsequent frame of

video image is taken there is still room in the frame buffer to buffer the video images as would

be readily apparent to one skilled in the art. Examiner notes that this takes place after the still

images are stored, namely stored in a frame buffer as shown in Figs. 2 and 5.

In regards to claim 8 note that in Fig. 5 both pipelines use the compression processor in the image compression means element 7 and the same imaging means 1.

In regards to claim 9 see Fig. 5 and Examiners notes on the rejection of claim 1.

In regards to claim 10 see Examiners notes on the rejection of claim 1.

In regards to claim 11 see Examiners notes on the rejection of claim 6.

In regards to claim 12 see Examiners notes on the rejection of claim 5.

In regards to claim 13 see Examiners notes on the rejection of claim 7.

In regards to claim 14 see Fig. 7 wherein Juen discloses a microprocessor element 18, and a DSP element 15 Note paragraph 0079.

In regards to claim 17 see Examiners notes on the rejection of claim 8.

In regards to claim 19 see Fig. 2.

In regards to claim 20 see Examiners notes on the rejection of claim 1.

In regards to claims 21 and 24 see Examiners notes on the rejections above.

Claims 2, 3, 15, and 16 are rejected under 35 U.S.C. 103(a) as being unpatentable over (USPN 2002/0024602 to Juen) in view of (USPN 5,712,681 to Suh) in further view of (USPN 6,181,476 to Rashkovskiy et al.).

In regards to claim 2 Juen discloses downsampling the video frames as disclosed by element 8 of Fig. 5 and paragraphs 47 and 49. Examiner notes that Juen does not explicitly disclose nor preclude that the imaging means be a color imaging means. Examiner notes that it is extremely well known in the art to use color filters so as to provide a color image rendition of a taken image. Juen does not disclose nor preclude performing demosaicing of the video or

still images. Examiner notes that it is extremely well known to provide demosaicing for color filters in order to generate all of the color signals for each pixel location for complete color reproduction (column 1, line 35 – column 2, line 19; column 3, lines 33-39; Rashkovskiy). Therefore it would have been obvious to one of ordinary skill in the art at the time of the invention to have used any of the demosaicing techniques disclosed by Rashkovskiy in order to generate all of the color signals for each pixel location for complete color reproduction and for generating an aesthetically pleasing display of the current scene.

Examiner notes that the above described process of demosaicing is a form of color correction, however, Rashkovskiy also discloses performing a luminance correction for the interpolation of the red and blue colors so as to increase image sharpness and reduce aliasing artifacts (column 4, line 12 – column 5, line 16; column 6, lines 47-65). Therefore it would have been obvious to one of ordinary skill in the art at the time of the invention to have preformed the color correction disclosed by Rashkovskiy in order to increase image sharpness and reduce aliasing artifacts.

In regards to claim 3 Examiner notes that one of ordinary skill in the art would readily recognize to perform the processing functions discussed above on both video frames and still images.

In regards to claim 15 see Examiners notes on the rejection of claims 2 and 3.

In regards to claim 16 see Examiners notes on the rejection of claim 3.

Claims 18, 22, and 23 are rejected under 35 U.S.C. 103(a) as being unpatentable over

(USPN 2002/0024602 to Juen) in view of (USPN 5,712,681 to Suh) in further view of (US PG-

PUB 2003/0112348 A1 to Okuley).

In regards to claim 18 Neither Juen nor Suh disclose nor preclude that the video pipeline

and the still image pipeline use separate image sensors. Okuley discloses an embodiment

depicted in Fig. 9 similar to Juen wherein a single image sensor provides means for recording

both still and motion images. Okuley further discloses in Fig. 8 an embodiment wherein the still

image recording and motion image recording pipelines have separate image sensors (paragraphs

0020-0023). Therefore it would have been obvious to one of ordinary skill in the art at the time

of the invention to have used two separate image sensors for the separate pipelines as implicitly

suggested by Okuley.

Examiner notes that one of ordinary skill in the art at the time of the invention would

clearly recognize that having separate image sensors for the separate pipelines is advantageous in

that it is not necessary to have complex read-out of the image sensor in the case where both still

image and moving images are recorded simultaneously as is done in the Juen reference.

Therefore it would have been obvious to one of ordinary skill in the art at the time of the

invention to have used two separate image sensors for the separate pipelines so as to not need

complex read-out of the image sensor in the case where both still image and moving images are

recorded simultaneously.

In regards to claims 22 and 23 see Examiners notes on the rejection of claim 18. Note

that Okuley discloses the image sensors have different resolutions in paragraph 0020.

Conclusion

THIS ACTION IS MADE FINAL. Applicant is reminded of the extension of time

policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE

MONTHS from the mailing date of this action. In the event a first reply is filed within TWO

MONTHS of the mailing date of this final action and the advisory action is not mailed until after

the end of the THREE-MONTH shortened statutory period, then the shortened statutory period

will expire on the date the advisory action is mailed, and any extension fee pursuant to 37

CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event,

however, will the statutory period for reply expire later than SIX MONTHS from the mailing

date of this final action.

Any inquiry concerning this communication or earlier communications from the

examiner should be directed to Brian C. Genco who can be reached by phone at 703-305-7881 or

by fax at 703-746-8325. The examiner can normally be reached on Monday thru Friday 8:30am

to 4:30 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's

supervisor, Andrew Christensen can be reached on 703-308-9644. The fax phone number for

the organization where this application or proceeding is assigned is (703) 872-9306.

Any inquiry of a general nature or relating to the status of this application or proceeding

should be directed to the customer service office whose telephone number is 703-308-4357.

Information regarding the status of an application may be obtained from the Patent

Application Information Retrieval (PAIR) system. Status information for published applications

may be obtained from either Private PAIR or Public PAIR. Status information for unpublished

applications is available through Private PAIR only. For more information about the PAIR

system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR

system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

> Brian C Genco
> Examiner
> Art Unit 2615

October 1, 2004

ANDREW CHRISTENSEN
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 2600